

PATENT SPECIFICATION



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326,457

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COMPLETE SPECIFICATION.

Apparatus for Producing Luminous Pictures in Space.

1, EINAR BERGVE, of Sorgenfrigaten 35, Oslo, Norway, a subject of the King of Norway, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The present invention has for its object an apparatus for producing luminous pictures which do not appear on a picture surface, but are produced in the space within a vessel having curved reflecting walls or in the space on the concave side of a curved reflecting surface.

The apparatus according to the present invention for the production of luminous pictures of the kind referred to comprises a transparent body with curved reflecting surface against which light rays are thrown from a primary luminous body or picture. The transparent body with curved reflecting surface is preferably made in the form of a hollow vessel, the shape of whose surface is more or less approximately that of a sphere.

The hollow vessel may be evacuated or may be filled with a gas or liquid.

The primary luminous picture or body by means of which the secondary luminous picture is produced in the space within the vessel is located laterally in or near the said vessel in such a manner that it is not directly visible in order to not disturb the effect of the secondary luminous picture.

In the drawing the principle of the invention is diagrammatically illustrated by means of a vertical cross section through an embodiment of the invention, the parts of the device which lie behind the surface of the paper being shown in perspective view.

In accordance with the embodiment illustrated the device comprises an approximately spherical hollow body 1 of glass or similar transparent material.

On one side the hollow glass vessel is provided with an approximately circular opening 2, to the edge of which is joined the cylindrical side wall 3 of a non-transparent casing which serves as base for the spherical body 1. In the said casing is located a source of light, such as an

electric lamp 4, and the top of the casing is formed by a translucent disc 5 on the surface of which the primary picture, such as an advertising sign 6 or the like in various colours, is located.

The disc 5 may be interchangeable in the same manner as the lantern slides of magic lanterns, or mechanically in the same manner as the films of cinematographic apparatus, in order to change the secondary luminous picture or to produce cinematographic pictures in the space within the spherical body.

The partial reflection of the light rays emanating from the primary luminous picture 6 upon striking the approximately spherical surface 1, has the effect of producing in the space within the spherical body a reproduction of the primary picture, and this reproduction will appear distinctly apart from the walls of the spherical body.

The secondary luminous picture produced in this manner is indicated on the drawing with 7, the part of that picture corresponding to the part of the primary picture shown on the drawing being indicated in dotted lines, as this part will be in front of the paper surface. The part of the secondary picture shown in full lines corresponds to a part of the primary picture which does not appear on the drawing.

The light rays from the different points, such as A, B of the primary picture 6 will be partially reflected as indicated by dot and dash-lines, to the points A¹, B¹ of the secondary picture, and in this manner a complete reproduction of the primary picture will be formed in the space within the spherical body so as to be visible from a point of observation 8 outside the spherical body.

In case a luminous body is substituted for the luminous picture 6, a luminous reproduction of that body will appear in the space within the hollow spherical body 1, and such bodies may be caused to perform movements within the spherical body by providing means for moving the primary luminous body.

As has been mentioned above, the primary luminous picture may be pro-

duced by means of a magic lantern or similar projecting device or by means of a cinematographic apparatus throwing pictures on a translucent picture surface located near the wall of the spherical body.

The said translucent picture surface may also be formed by a part of the wall of the spherical body itself, and the projection device may be placed at any convenient distance from the spherical body.

It is preferred to provide a non-transparent collar or the like, such as 9, at the top of the base 3 in order to prevent direct light rays from the primary luminous picture to reach the observer.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A device for obtaining luminous reproductions in space of illuminated objects or pictures comprising a curved transparent reflecting surface, on the concave side of which the rays from the illuminated object or picture are thrown.

2. In a device for obtaining luminous reproductions in space the combination of an object or picture, means for illuminating the same, and a curved transparent reflecting surface on the concave side of which the rays from the illuminated object or picture are thrown.

3. A device as claimed in claims 1 and 2, characterised by a hollow, transparent body having a smooth, substantially spherical surface on the concave side of which the rays from the illuminated object or picture are thrown.

4. A device as claimed in any of the previous claims characterised by a translucent picture surface placed in such a manner with relation to the transparent body that the light rays from said translucent picture surface are thrown on the concave side of the said body.

5. A device as claimed in any of the preceding claims, characterised by the fact that the transparent body is substantially in the shape of a sphere.

6. A device as claimed in claims 4 and 5, characterised by the fact that the translucent picture surface is located on or adjacent part of the surface of the said spherical body.

7. A device for obtaining luminous reproductions in space of illuminated objects or pictures substantially as specified and illustrated.

Dated this 11th day of December, 1928.

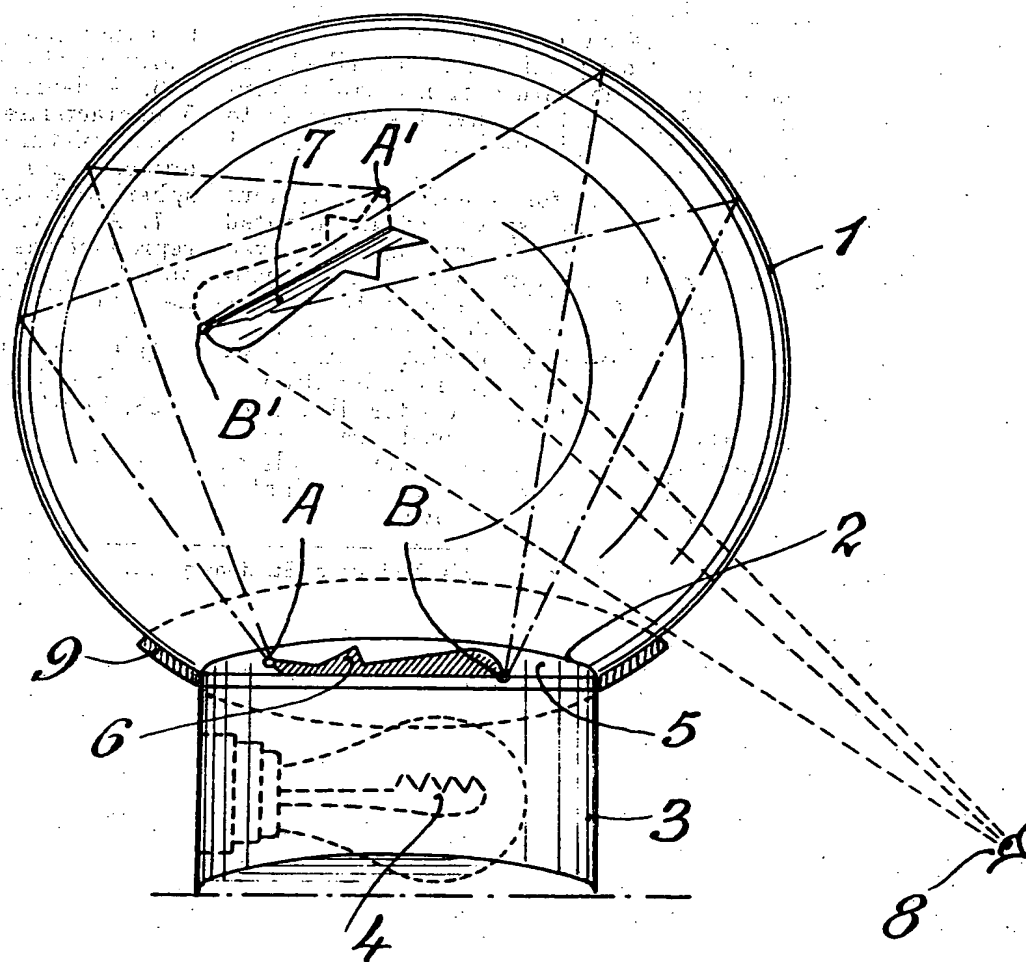
HASELTINE, LAKE & Co.,

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Agents for the Applicant.

[This Drawing is a full-size reproduction of the Original.]



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